



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,023	09/29/2003	David W. Pedlar	1578.620	4511
54120 7590 07/17/2007 RESEARCH IN MOTION, LTD 102 DECKER CT. SUITE 180 IRVING, TX 75062			EXAMINER CASCA, FRED A	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 07/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,023	Applicant(s) PEDLAR ET AL.	
	Examiner Fred A. Casca	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment filed on May 21, 2007. Claims 1-10 are still pending in the present application.

Response to Arguments

2. Applicant's arguments filed on May 21, 2007 with respect to the rejection of claims 1-10 dated February 23, 2007 is persuasive and. However, claims 1-10 are rejected in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-4, and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Longoni et al (US 2001/0018345 A1), in view of TSG-RAN Working Group 2 – TSGR#2(99)181 (hereafter TSG#2(99)181).

Referring to claims 1 and 6, Longoni discloses a method and a user equipment for performing a cell update during a reconfiguration procedure in a user equipment in a communications system (abstract, "performing a cell update procedure"), the method comprising the steps of:

Art Unit: 2617

receiving a reconfiguration command including an activation time at which a reconfiguration is to be applied (paragraph 3 and 4, 9, “MS routing information message”, “Cell Update Request Message”, note that the reconfiguration process inherently includes an activation time),

and detecting a trigger event which indicates that a cell update is required (paragraph 3, “In a ‘cell update’ mode . . . MS in RACH/FACH . . . mode enters a new cell”, note that the movement of the MS from one cell coverage area to another triggers a cell update event).

Longoni does not specifically disclose **delaying initiation of the cell update until the reconfiguration has been applied.**

Examiner notes that delaying initiation of the cell update until the reconfiguration has been applied is a well known cell update process in 3GPP system as TSGR#2(99)181 discloses this concept (page 1-4, particularly page 3, “The cell update procedure is used by the UE to inform the UTRAN that the UE has switched to a new cell. The procedure is a forward handover procedure . . . the procedure is triggered after change of cell and after the UE has read information broadcasted by UTRAN”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method and user equipment of Longoni as claimed by applicant by incorporating the teachings of TSGR#2(99)181, and consequently providing delaying initiation of the cell update until the reconfiguration has been applied, for the purpose of providing an efficient cell-selection procedure.

Referring to claims 3 and 8, claims 3 and 8 define a method of handling a cell update and a user equipment for handling a cell update reciting features analogous to the features of claims 1 and 6 (as rejected above). Thus, the combinations of Longoni/TSGR#2(99)181 discloses all elements of claims 3 and 8 (please see the rejection of claim 1 above).

Referring to claims 4 and 9, the combinations of Longoni/Hall disclose methods according to claims 1 and 3, and further disclose user equipment configured to communicate with a UTRAN in a UMTS communications system, comprising suppressing the cell update depending on the relevance of the trigger event to the UTRAN after reconfiguration (Longoni, paragraph 3, and Hall, col. 4, lines 6-20, col. 9, lines 40-51, and col. 11, line 48 – col. 12 line 20, and TSGR#2(99)181 pages 1-3, note that suppressing the cell update is the delaying process which delays the initiation of the cell update until the reconfiguration has applied, as rejected in claim 1 above (please rejection of claim 1).

Referring to claim 7, the combinations of Longoni/TSGR#2(99)181 disclose a user equipment according to claim 6, and further disclose a timer arranged to cooperate with the controller for delaying initiation of the cell update (TSGR#2(99)181, pages 1-3).

5. Claims 2, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Longoni et al (US 2001/0018345 A1), in view of TSG-RAN Working Group 2 – TSGR#2(99)181 (hereafter TSG#2(99)181) and further in view of well known prior art (MPEP 2144.03).

Art Unit: 2617

Referring to claim 2, the combinations of Longoni/TSGR#2(99)181 disclose a method according to claim 1, and further disclose the activation time has the value 'Now', the method including applying the reconfiguration as soon as the user equipment is able to do so.

The combinations of Longoni/TSGR#2(99)181 do not specifically disclose activation time has the value 'Now', applying the reconfiguration as soon as the user equipment is able to do so.

The examiner takes official notice of the fact that activating a cellular equipment as soon as possible after a cell-updating is well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Longoni/TSGR#2(99)181 by incorporating the teachings of prior art for the purpose of providing a better service to cell phone users.

Referring to claims 5 and 10, the combinations of Longoni/TSGR#2(99)181 disclose a method according to claims 4 and 9.

The combinations of Longoni/TSGR#2(99)181 do not specifically disclose suppressing the cell update when the trigger event comprises a radio link failure.

The examiner takes official notice of the fact that suppressing or disabling a cell update during movement of a cellular phone from a current cell to an adjacent cell is well-known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the methods of claims 4 and 9 by incorporating the teachings of prior art for the purpose of preventing packet loss during the link failure.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER

Agenda Item: 7.10

Source: Fujitsu

Title: Proposal for Cell / URA Update procedure

Document for Decision

Abstract

There exists further study items in Cell / URA update procedure. This contribution will propose the solution for one of them.

1. Introduction

Cell / URA update procedures are described in S2.31, and it is quoted to ANNEX 1.

One of the purpose of these procedures is surely to allocate a new RNTI to UE. And further study item is, in these procedures, the necessity of an explicit Cell / URA UPDATE COMPLETE message to be sent from the UE to the UTRAN on layer 3. There are two assumptions exist.

One is that there is an explicit layer 2 peer-to-peer signalling to establish the signalling link, making an explicit Cell / URA UPDATE COMPLETE message on layer 3 unnecessary.

The other is that there is an explicit Cell / URA UPDATE COMPLETE message that UE confirms whether UTRAN receives Cell / URA UPDATE CONFIRM message.

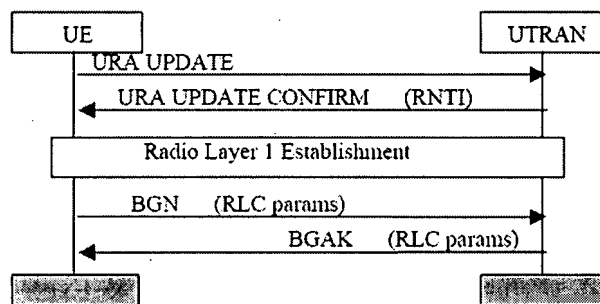
2. Discussion

Cell / URA UPDATE procedure makes RNC change. Therefore these procedures include the following functions:

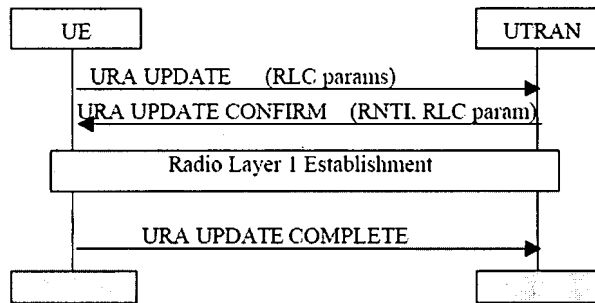
- 1) Initialisation of RLC variables in each side,
- 2) allocation of the new initial credit (RLC parameter) for the acknowledged mode data transfer,
- 3) allocation of the new RNTI.

In order to realise these, next two schemes are considerable.

Case 1)



Case 2)



In both cases, new RNTI is delivered by Cell / URA UPDATE CONFIRM message. It is already agreed, I believe. After sending/ receiving Cell / URA UPDATE CONFIRM message, radio layer 1 will be established on DCCH. And the new RLC connection between UTRAN and UE should be established. Case 1 indicates that the explicit layer 2 establishment procedure is performed and case 2 indicates the implicit procedure.

Regarding case 1, UTRAN can recognise that UE gets the new RNTI and can get RLC parameter when it receives BGN PDU. With sending/ receiving BGN PDU as a trigger, each node can initialise RLC variables.

Regarding case 2, Cell / URA UPDATE message conveys RLC parameter. UTRAN can recognise that UE gets the new RNTI when it receives Cell / URA UPDATE COMPLETE message. With recognising radio layer 1 establishment as a trigger, each node can initialise RLC parameters/ variables independently.

From above investigation, case 1 is more redundant than case 2. And, case 1 will cause more implementation complexity and delay.

3. Proposal

To summarise, it is possible that implicit RLC establishment procedure is desirable for Cell / URA update procedure. Therefore Cell / URA update procedures need an explicit Cell / URA UPDATE COMPLETE message on layer 3. ANNEX 2 is the proposed description in S2.31.

ANNEX 1

8.3.5.7 URA update

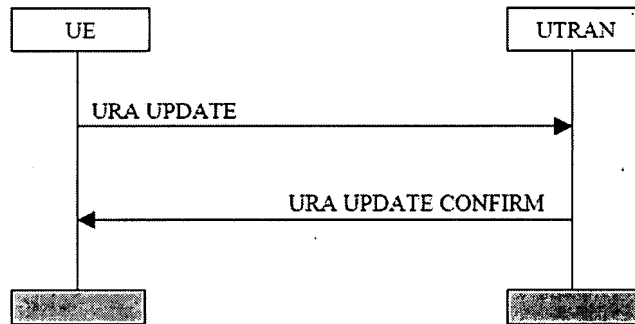


Figure 1) URA update procedure.

The URA update procedure is used by the UE to inform the UTRAN that the UE has switched to a new URA. Normally the procedure is triggered after change of cell and after the UE have read information broadcasted by UTRAN indicating change of URA.

The UE establishes a radio link to a cell in the new URA. After that the UE sends a URA UPDATE message to the UTRAN. Upon reception of the message the UTRAN registers the change of URA, and sends a URA UPDATE CONFIRM message to the UE. The URA UPDATE CONFIRM message may include a new RNTI.

[Note1: Whether it should be possible for the UTRAN to trigger a URA update request from the UE is FFS.]

[Note 2: The need for a completing message, sent from the UE to finalize the procedure, is FFS.]

8.3.5.8 Cell update

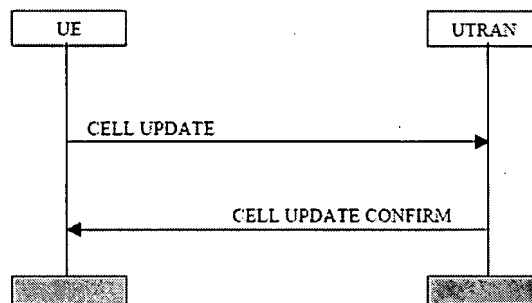


Figure 2) Cell update procedure.

The cell update procedure is used by the UE to inform the UTRAN that the UE has switched to a new cell. The procedure is a forward handover procedure. Normally the procedure is triggered after change of cell and after the UE has read information broadcasted by UTRAN.

The UE abandons the radio link to the old cell and establishes a radio link to the new cell. After that the UE sends a CELL UPDATE REQUEST message to the UTRAN. Upon reception of the message the UTRAN registers the change of cell, and sends a CELL UPDATE CONFIRM message to the UE. The CELL UPDATE CONFIRM message may include a new RNTI.

The cell update procedure can also include the updating of which FAUSCH channel should be used in the new cell.

[Note1: Whether it should be possible for the UTRAN to trigger a cell update request from the UE is FFS.]

[Note 2: The need for a completing message, sent from the UE to finalize the procedure, is FFS.]

ANNEX 2

8.3.5.7 URA update

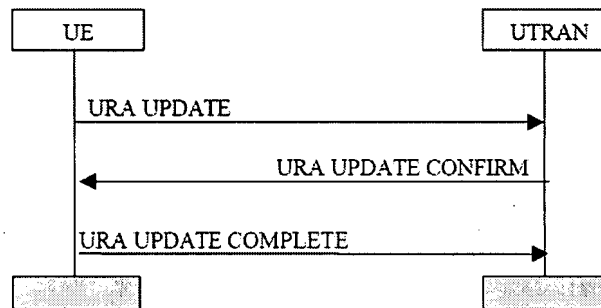


Figure 3) URA update procedure.

The URA update procedure is used by the UE to inform the UTRAN that the UE has switched to a new URA. Normally the procedure is triggered after change of cell and after the UE have read information broadcasted by UTRAN indicating change of URA.

The UE establishes a radio link to a cell in the new URA. After that the UE sends a URA UPDATE message to the UTRAN. Upon reception of the message the UTRAN registers the change of URA, and sends a URA UPDATE CONFIRM message to the UE. The URA UPDATE CONFIRM message may include a new RNTI. When UE gets the new RNTI, UE sends the URA UPDATE COMPLETE message to UTRAN.

Credit for acknowledged transfer mode should be on URA UPDATE message and URA UPDATE CONFIRM message.

[Note1: Whether it should be possible for the UTRAN to trigger a URA update request from the UE is FFS.]

[Note 2: The need for a completing message, sent from the UE to finalize the procedure, is FFS.]

8.3.5.8 Cell update

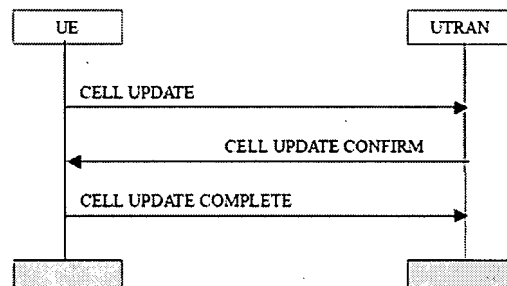


Figure 4) Cell update procedure.

The cell update procedure is used by the UE to inform the UTRAN that the UE has switched to a new cell. The procedure is a forward handover procedure. Normally the procedure is triggered after change of cell and after the UE has read information broadcasted by UTRAN.

The UE abandons the radio link to the old cell and establishes a radio link to the new cell. After that the UE sends a CELL UPDATE REQUEST message to the UTRAN. Upon reception of the message the UTRAN registers the change of cell, and sends a CELL UPDATE CONFIRM message to the UE. The CELL UPDATE CONFIRM message may include a new RNTI. When UE gets the new RNTI, UE sends the Cell UPDATE COMPLETE message to UTRAN.

Credit for acknowledged transfer mode should be on Cell UPDATE message and Cell UPDATE CONFIRM message.

The cell update procedure can also include the updating of which FAUSCH channel should be used in the new cell.

[Note1: Whether it should be possible for the UTRAN to trigger a cell update request from the UE is FFS.]

[Note 2: The need for a completing message, sent from the UE to finalize the procedure, is FFS.]

http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_02/Docs/pdfs/R2-99181.pdf